

Tuesday, April 21, 2015 2:05:32 PM

131808

Page 1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Windshield Deflector - Lower

Stop *NS2*

Start Date: 4/20/15 **Start Qty:** 5.00

5

Cust Item ID:

Required Date: 4/20/15 **Req'd Qty:** 5.00

5

Customer:

Reference:

Approvals: Process Plan: MLS Date: 15-04-22 Tooling: Date:

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4970	C

100

Cut blanks as per folio

0.00

100

Bandsaw

Memo

0.00

Jeaspa Bandsaw

CUT BLANK AT 27.625"

110

0.00

110

HAAS 1

HAAS CNC VERTICAL MACHINING #1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine per folio FB302

DWG REV: C

FOLIO REV: 44.

2- deburr and break all sharp edges

**DAS
20
9-89**

15-04-20

DAS
20
9-89

15-04-20

DQA: Out Date: 15/05/15

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: RPM Date: 15/05/12Work Order update only ☐

Work Order: <u>131808</u> Part No. <u>D4970-1</u> NCR No. <u>15-4940</u>	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☒</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>			Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Date: <u>15-05-04</u>	Step #: <u>110</u>	QTY Effective: <u>①</u>	MRB (QSI042) Approval <u>S 15/05/04</u>																																																																
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		Completed By DAS 20 9-89 15-04-29 Lead hand / Supervisor Approval Verification <u>D. 15/04/29</u> DAS 08 08 QC / QA Coordinator Approval DAS 9 9-89 15-05-04																																																																	
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OTHER: ☐																																																																			

Work Order ID 131808

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131808

Page 2

Item ID: D4970-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Windshield Deflector - Lower
Start Date: 4/20/15 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 4/20/15 Req'd Qty: 5.00 ***5*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00				4	1		DAS 20 9-89 15-04-29
120									
QC	Memo	0.00							
Quality Control									
130	QC8- Inspect parts - second check	0.00				4			DAS 14 9-89 15/04/30
130									
QC	Memo	0.00							
Quality Control									
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00				02			MAR 04 2015 4
140									
Outsource4	Memo	0.00							
Outsource process - Anodize	Issue P/O to ATG : <u>28352</u>								
	1- Black Anodize as per Dwg D4970								
	Certification of Comformity is required								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Work Order ID 131808

Tuesday, April 21, 2015 2:05:32 PM

131808

Page 3

Item ID: D4970-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Windshield Deflector - Lower
Start Date: 4/20/15 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 4/20/15 Req'd Qty: 5.00 ***5*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									
155	QC5- Inspect part completeness to step on W/O	0.00							
155									
QC	Memo	0.00							
Quality Control									
180	Identify as per dwg & Stock Location: <u>MF</u>	0.00							
180									
Packaging	Memo	0.00							
Packaging									

4x SP15058

(4)

DAS 38 9-89

MAY 08 2015

DAS 6 9-89

MAY 08 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
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Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : ☐			
Misidentified ☐		Past Due ☐					

Picklist Print

Tuesday, April 21, 2015 2:05:32 PM

Page 1

Work Order ID: 131808

131808

Parent Item: D4970-1

D4970-1

Parent Item Name: Windshield Deflector - Lower

Start Date: 4/20/15

Required Date: 4/20/15

Start Qty: 5.00

Required Qty: 5.00

Comments:

IPP REV:A NEW ISSUE 13-11-27 JLM VERIFIED BY:DD

IPP REV:B AS PER REV. B JFS 14/05/08 VERIFIED BY: DD IPP REV:C

AS PER REV. C DD 14.06.17 VERF BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M7075T6B2.250X02.75

Purchased

No

100

f

63.3700

2.302

13

DAS

20

9-89

5-04-29

M7075T6B2 250X02 750

**

12.000'

7075-T6 BAR 2.250' X 2.750"

Location

Loc Qty

Loc Code

MAT006

63.37

m126615

63.37

12.000'

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

ITEM	QTY -041	P/N	DESCRIPTION
1	X	D4970-041	WINDSHIELD DEFLECTOR ASSY
2	1	D4970-1	WINDSHIELD DEFLECTOR - LOWER
3	1	D4970-3	WINDSHIELD DEFLECTOR - UPPER
4	2	D4970-5	DOUBLER
5	6	MS20470AD6-12	RIVET, SOLID, PAN HEAD

C215/04/22
W/O. 13/808

RELEASED
2014-06-11
m

D4970-041 WINDSHIELD DEFLECTOR ASSY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX, AS PER QSI 005. APPLY FINISH AFTER ASSEMBLY
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4970-041", REVISION, BATCH NUMBER AND DATE OF MANUFACTURE, USING AN X-TENSION STAMP, PER QSI 044 METHOD 6.2
- 7) WEIGHT: 3.14 lbs (1.44 kgs)
- 8) APPLY RTV SEALANT LOCTITE 598 TO FAYING SURFACES

C	REVISED D4970-1 (ZN B4-3), ADDED DETAIL C (ZN C3-3), ADDED FOUR HOLES TO D4970-3 (ZN D6-5), REVISED HOLE DIMENSION FROM 0.191 TO 0.201 (ZN B4-5); REVISE NOTE 6) (ZN A5-1, A6-3, A8-4, A8-6)	AK	14.06.05
B	ADDED HOLES TO D4970-1 AND D4970-3. ADDED SHEET 5	AK	14.05.02
A	NEW ISSUE	DC	13.11.08
REV.	DESCRIPTION	BY	DATE
DESIGN	DC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	HS	DRAWING NO. REV. C	
MFG. APPR.	JLM	D4970 SHEET 1 OF 6	
APPROVED	HS	TITLE SCALE	
DE APPR.	DS	WINDSHIELD DEFLECTOR NTS	
DATE	14.06.05	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR DISCLOSED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

APPROVED

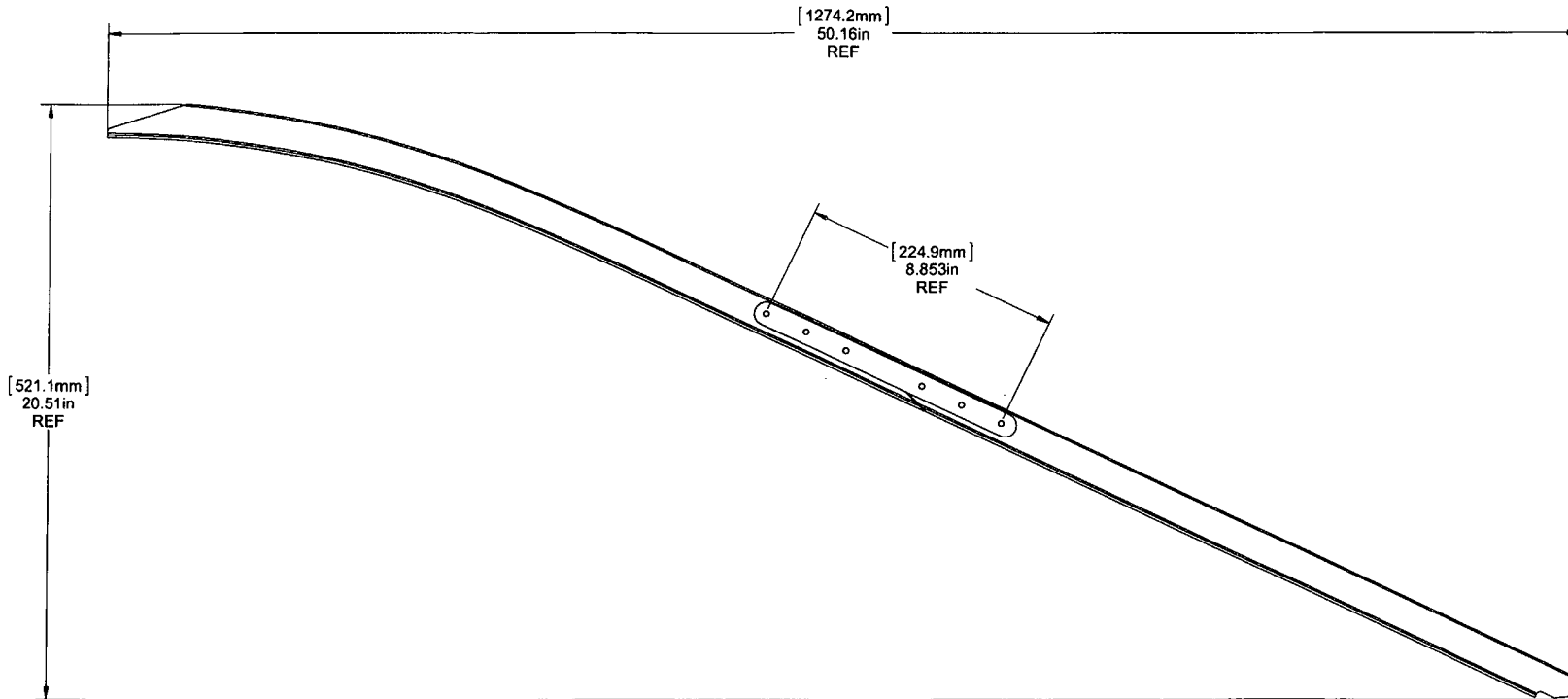
8 7 6 5 4 3 2 1

D

C

B

A



D4970-041 WINDSHIELD DEFLECTOR ASSY
AUXILIARY VIEW

RELEASED
2014-06-11
W

APPROVED

DESIGN	DC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	HS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D4970	SHEET 2 OF 6
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	WINDSHIELD DEFLECTOR	NTS
DATE	14.06.05	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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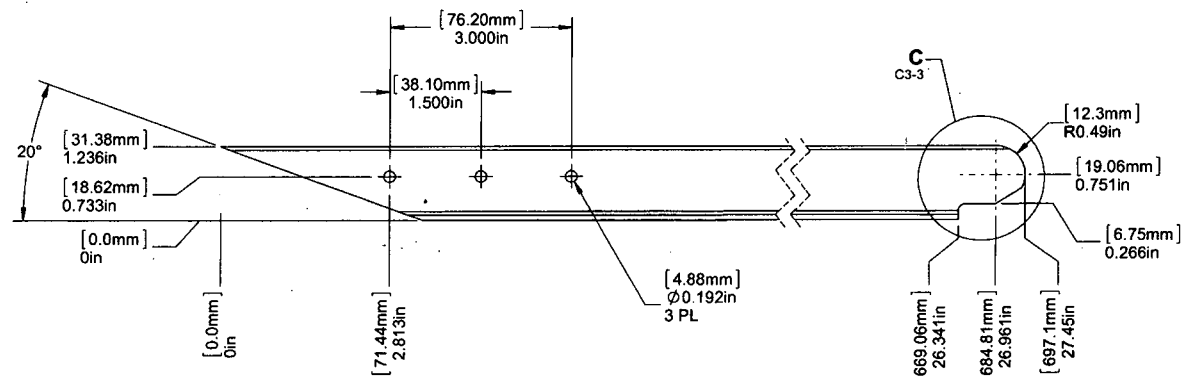
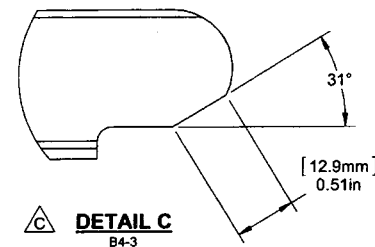
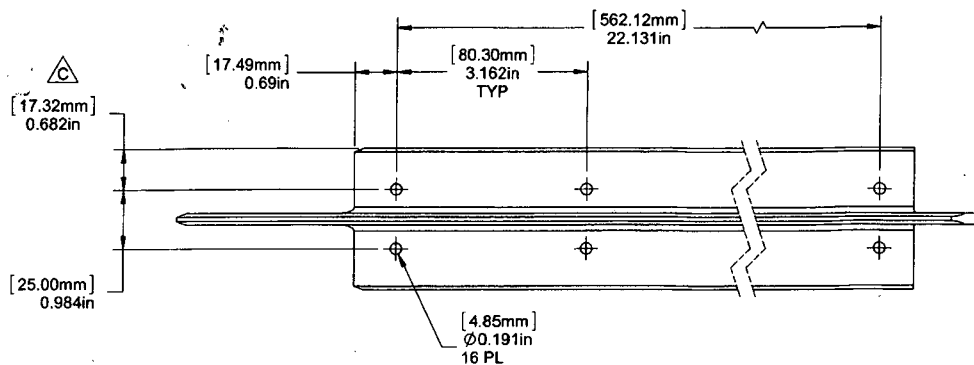
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D4970-1 WINDSHIELD DEFLECTOR - LOWER

NOTES:

- 1) MATERIAL: 7075-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR
PER AMS-QQ-A-225/9 (OR AMS 4122/4123/4186/4187) OR
PER AMS-QQ-A-200/11 (REF DART SPEC M7075T6B)
- 2) FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4970-1", REVISION, BATCH NUMBER AND
DATE OF MANUFACTURE, USING AN X-TENSION STAMP, PER QSI 044 METHOD 6.2
- 7) WEIGHT: 1.34 lbs (0.62 kgs)
- 8) PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: D4970-1-c.IGES
- 9) REFERENCE APICAL PART NUMBER 647.9413

RELEASE
2014-03-11

APPROVED

DESIGN	DC	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	HS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D4970	SHEET 3 OF 6
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	WINDSHIELD DEFLECTOR	NTS
DATE	14.06.05	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO28352**

Purchase Order Date 5/4/2015

PO Print Date 5/7/2015

Page Number 1 of 2

Order From :

VC-ATG001

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
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1	132175	650.9201 EYELET BRACKET REV. A	5/8/2015		20.00	\$9.25	\$185.00
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Yes

5/8/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

NOTE: MASK THREADS BEFORE PRIMING

Line Total: \$185.00

2	131808	D4970-1 WINDSHIELD DEFLECTOR REV.C	5/8/2015		4.00	\$43.75	\$175.00
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Yes

5/8/2015

FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2
COLOR BLACK

Line Total: \$175.00

Note:

5/7/2015



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 63691

Date: 08-May-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
20 lot	Part: 650.9201 EYELET BRACKET HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY CUSTOMER Job: 20150346	Rev:	
4 ea	Part: D4970-1 WINDSHIELD DEFLECTOR HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150347	Rev: C	Line: <i>SP15-05-8</i>
Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY DATE: <i>8/5/15</i> CERTIFIED SIGNATURE: <i>[Signature]</i> RECEIVER SIGNATURE: _____			